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Peculiarities of Proteus mirabilis extracellular metalloproteinase biosynthesis

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Abstract

© 2015, Pleiades Publishing, Inc. Biosynthesis of metalloproteinase by the Proteus mirabilis 5127-1 strain on different media and the influence of glucose and urea on biosynthesis were studied. It was found that the P. mirabilis 5127-1 bacteria secretes metalloproteinase in the medium in two isoforms (52 and 50 kDa). It was established that proteinase synthesis is completely suppressed during the growth of bacteria on synthetic media, as well as in the presence of glucose in the LB medium. It was demonstrated that addition of urea in the medium results in an increase of the culture productivity in the proteinase synthesis. Maximal culture productivity in the proteinase synthesis was found in the medium with natural urine. During the growth of bacteria on artificial urine, proteinase appeared in the medium only after 12 hours of growth as a single isoform.

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